

ferently, more sparsely ribbed dorsal girdle scales, and the differently shaped central radular tooth.

It is to be hoped that more specimens will turn up in due course, although I have the impression that it is rather rare in this well-investigated area.

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A NEW TROPICAL EASTERN PACIFIC OVULIDAE (GASTROPODA): *XANDAROVULA HAMMESI*

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In a recent review of the Ovulidae, Cate (1973) listed 7 species from the Panamic province (tropical west America). Since then, although more than 25 additional new taxa of ovulids have been proposed from Indo-Pacific and Caribbean waters (e.g., Azuma, 1972; Cate, 1974b, 1975, 1976a, and 1978; and Petuch, 1979), only one new species has been named from the Panamic region (Cate, 1976b). Emerson and Old (1965) had previously reported the Galapagan occurrence of *Pseudocypraea adamsonii*, an Indo-Pacific ovulid. To these tropical eastern Pacific ovulid species we add the following: 2 species from Panama, one known only from the type locality and the other a widely ranging taxon in the western Pacific:

Xandarovula hammesi
Bertsch & Bibbey, sp. nov.
(Figs. 1-6)

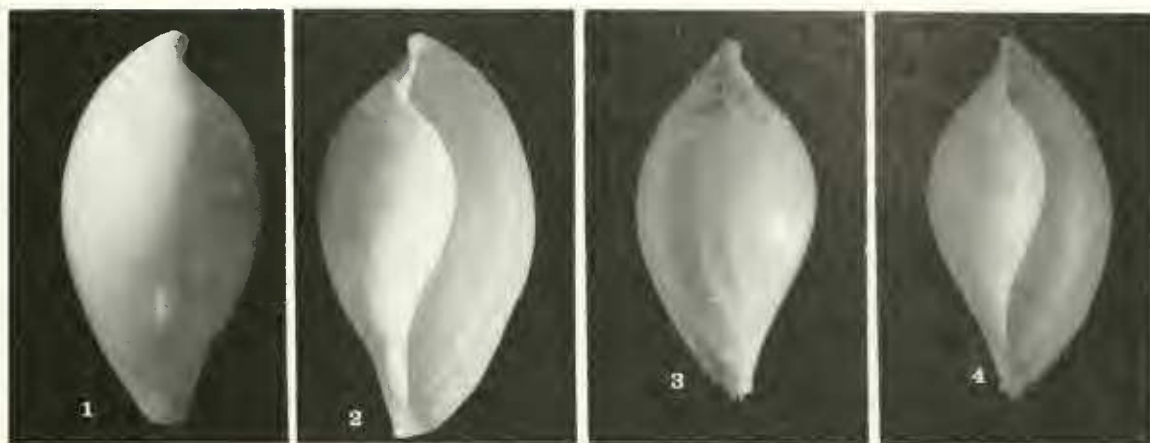
Description: Thin, white glossy shell, quite large for the genus; ovalish, with both ends pointed; bulbous in the middle; adapical terminal protrudes sharply, completely on right-half of shell, distinctly set off from the left side of the bulbous body whorl, abapical terminal much

more gently narrowing along the left side; smooth except for extremely fine longitudinal growth striae, and faint, fine transverse line more prominent terminally and on the columella; outer lip evenly rounded, circular rather than oval; no lip callus; apertural opening comprises nearly 1/2 the total area of the ventral side; aperture terminals open slightly to the side adapically, but straight abapically (anteriorly); anterior columellar region thin and narrow, forming a fragile edge to the anterior gutter-shaped siphonal canal; posterior axis delicately tortuous, twisting a full 180° from its proximal juncture with the body whorl to its distal termination.

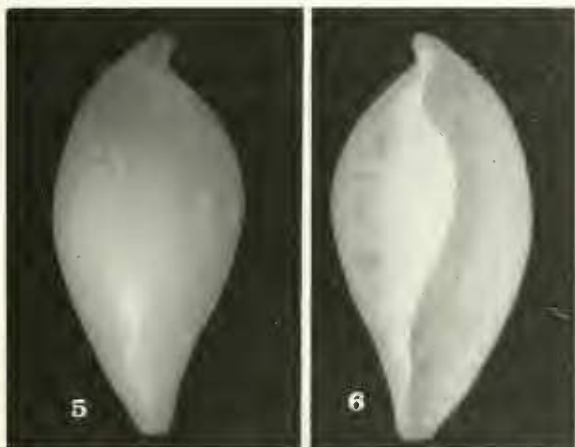
Measurements:

	Length	Width
Holotype,	37 mm	19 mm (Figs. 1 and 2)
Paratype,	31 mm	14 mm (Figs. 3 and 4)
(Hammes' collection)	33 mm	17mm (Figs. 5 and 6)

Type locality: All three specimens examined were collected in shrimp nets from about 1000 feet, off Cebaco Island (approx. 7°30'N; 81°30'W), Pacific coast of Panama, approximately in September of 1979. Holotype: San Diego Natural History Museum, Marine Inver-



FIGS. 1-4. *Xandarovula hammesi*. 1 and 2, Holotype (SDNHM Marine Invertebrates T.S. 513), 37 mm in length. 3 and 4, Paratype (SDNHM Marine Invertebrates T.S. 517). (Photos by Bertsch)



FIGS. 5 and 6. *Xandarovula hammesi* n. sp. Paratype in the Hammes' collection. Length: 33 mm. (Photos by Bertsch)

tebrates, Type Series 513. Paratype: S.D.N.H.M., Type Series 517.

Discussion: This new species is separated from the other 5 known species of *Xandarovula* by geographic location (*X. patula* occurs in European waters, and the other 4 species are western Pacific, from Japan to Australia) and morphology. *Xandarovula hammesi* has an evenly rounded outer lip, but the lip flares adapically in *X. pagoda* Cate, 1973, and flares (is broader, wider) adapically in *X. patula* (Pennant, 1777). *Xandarovula xanthochila* (Kuroda, 1928) and *X. formosana* (Azuma, 1972) both

have a slight callus and sulphur yellow coloration along the margin of the outer lip; by contrast, the outer lip of *X. hammesi* has no thickening and is the same white as the rest of the shell. This new species most resembles *X. figgisae* Cate, 1973, but can be immediately distinguished by the shape of the adapical (posterior) terminal. In *X. figgisae* the columellar portion of the terminal extension is relatively broad and short (width greater than 1/2 the length). Comparative illustrations of European and western Pacific *Xandarovula* can be found in Cate (1973: figs. 66 to 71) and Azuma (1972: figs. 2 and 3; radula, fig. 7) and 1976: pl. 1, figs. 14 and 15).

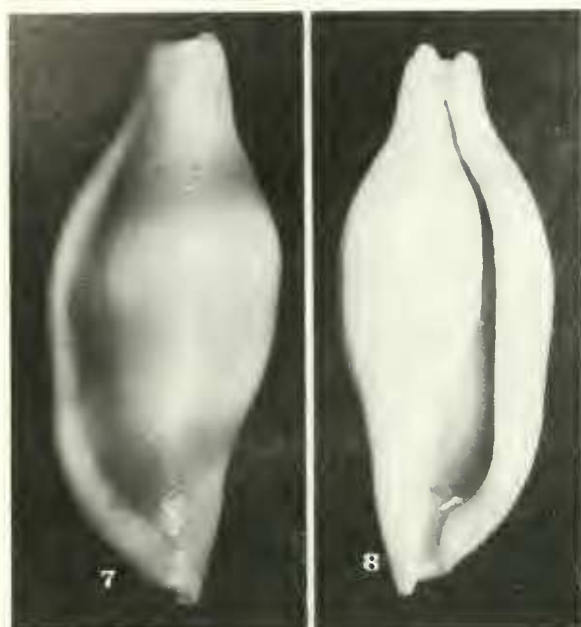
Etymology: This new species honors Mr. Terry Hammes, of Panama.

Phenacovolva brevirostris (Schumacher, 1817)
(Figs. 7-8)

Description: Smooth pale-apricot shell, with 3 transverse brownish bands; spindle-shaped; thick callus on outer lip, orange-colored, straight anteriorly, angles sharply at each end; funiculum faintly crenate.

Measurement: 20 mm × 9 mm; in the collection of the American Museum of Natural History, Department of Invertebrates, AMNH 198612.

Locality: This specimen was live-collected near Los Zurroneles, west Panama, by Royce E. Hubert, in 1979. Mr. William E. Old, Jr., first



FIGS. 7 and 8. *Phenacovolva brevirostris* from western Panama (AMNH 198612). (Photos by Barbara Myers)

identified and recognized the significance of this specimen.

Discussion: Two recent papers have summarized the known Indo-Pacific gastropod mollusks that occur in tropical west America (Emerson, 1978; Bertsch, 1979). The related family Cypraeidae has about 10 Indo-Pacific species in the Panamic province, but this is only the second ovulid with pan-Pacific distribution. Previous records of the present species include the east Asian mainland, the Japanese Ryukyus, Philippine and Cook Islands, Celebes-Sulu Sea (Cate, 1969:364-365), Queensland and Sydney, Australia (Allan, 1956:132) and Hawaii (Kay, 1979:204). This, however, is the first record of the species from the Pacific coast of the Americas.

Detailed comparison of internal and external (shell) anatomy will be necessary to determine the relationship between *Phenacovolva brevirostris* and *P. lemoreae* Cardin & Walls, 1980.

ACKNOWLEDGMENTS

We thank Barbara Myers (SDNHM) for the

photographs; Dr. William K. Emerson and William E. Old, Jr. (AMNH) for advice and the loan of the *Phenacovolva* specimen, and Terry Hammes for allowing us to examine his *Xandarovula* specimens.

TABLE 1. *Species of Ovulidae in the eastern Pacific. Distribution Key: P signifies a Panamic species (tropical west America); C a Californian species, and IP indicates Indo-Pacific distribution. Generic usages after Cate (1974a), McLean (1978), and Schilder and Schilder (1971).*

<i>Cymborula</i> Cate, 1973
<i>Cymborula bratcheriae</i> (Cate, 1973) P
<i>Cyphoma</i> Röding, 1798
<i>Cyphoma emarginatum</i> (Sowerby, 1830) P
<i>Delonovolva</i> Cate, 1973
<i>Delonovolva aequalis aequalis</i> (Sowerby, 1832) P
<i>Delonovolva aequalis vidleri</i> (Sowerby, 1881) C
<i>Delonovolva macleani</i> Cate, 1976 P
<i>Jenneria</i> Jousseau, 1884
<i>Jenneria pustulata</i> (Lightfoot, 1786) P
<i>Neosimnia</i> Fischer, 1884
<i>Neosimnia avena avena</i> (Sowerby, 1832) P
<i>Pedicularia</i> Swainson, 1840
<i>Pedicularia californica</i> Newcomb, 1864 C
<i>Phenacovolva</i> Iredale, 1930
<i>Phenacovolva brevirostris</i> (Schumacher, 1817) P & IP
<i>Pseudocypraea</i> Schilder, 1927
<i>Pseudocypraea adamsonii</i> (Sowerby, 1832) P & IP
<i>Simnialena</i> Cate, 1973
<i>Simnialena inflexa</i> (Sowerby, 1832) P
<i>Simnialena rufa</i> (Sowerby, 1832) P
<i>Spiculata</i> Cate, 1973
<i>Spiculata barbarensis</i> (Dall, 1892) C
<i>Spiculata loebbeckeana</i> (Weinkauff, 1881) C
<i>Subsimnia</i> Cate, 1973
<i>Subsimnia bellamaris</i> (Berry, 1946) C
<i>Xandarovula</i> Cate, 1973
<i>Xandarovula hammesi</i> Bertsch & Bibbey sp. nov. P

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A NEW *FAVORINUS* (NUDIBRANCHIA: AEOLIDOIDEA) FROM THE CANARY ISLANDS

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ABSTRACT

Favorinus vitreus, a new nudibranch is described from the Canary Islands with a discussion of other Atlantic species.

In July 1980, among material collected from Tenerife, during a trip supported by the Junta de Canarias and La Laguna University, we found 40 species of Ascoglossa and Nudibranchia; of the latter, I collected two specimens of a small *Favorinus* with two white swellings in the rhinophores which is here described as a new species.

Favorinus vitreus n. sp.
(Figs. 1-3)

Type locality: Los Cristianos beach (26°00'N; 16°30'W), Tenerife, Canary Islands, 23 July 1980, two specimens found on the brown algae (*Sargassum* sp. and *Cystoseira* sp.) with small polyzoans and spaws of an undetermined Polyceridae.